Amendments to the Specification

Please amend the specification as follows:

On page 37 beginning at line 17, please amend the paragraph as follows:

The lamp forecast value is established separately from the forecast value of the wafer radiation. Here, the intensity of the lamp radiation is first of all established using the effective voltage applied to the lamps or another suitable radiation source parameter with a lamp (radiation source) model, and this happens in block 50. The effective voltage applied to the lamps is supplied, for example, from the control unit in block 34 in accordance with fig. 3 to block 50. In order to simplify the lamp model, the intensity is not determined for every individual lamp, of which, for example, over fifty can be provided in the fast heating unit. Rather, the lamps are preferably divided into different groups, for example four groups, whereby the lamps of each group are substantially actuated respectively with the same lamp voltage. With the preferred embodiment given as an example, the intensity value is determined for the respective groups using at least two representatives from the group.

On page 41, beginning at line 17, please amend the paragraph as follows:

As described above, in block 48 in accordance with fig. 4, a forecast value of the wafer radiation is added to a lamp forecast value so as to obtain a forecast wafer pyrometer signal $(DC + AC)_{compl.\ forecast}$. This forecast wafer pyrometer signal, which has a changeable as well as a constant portion, is conveyed to a filter in block 90 in which the constant portion is filtered out. The signal output from block 90 thus only includes a changeable portion which substantially only originates from the modulation of the lamp radiation. This signal is call $AC_{lamp\ forecast}$. This signal is forwarded as an input value into block 92. As an additional input value, a filtered portion of the wafer pyrometer signal measured is conveyed into the block 92. For this, the wafer

pyrometer signal (DC + AC) $_{compl.\ measured}$ is conveyed through a filter in block [94] 92 so as to filter out the constant portion. The resulting signal corresponds to the measured changeable portion of the wafer pyrometer signal AC $_{measured}$ which is also conveyed as an input value into the block 92. An emissivity value for the wafer is determined in block 92 from the measured changeable portion of the wafer pyrometer signal and the forecast changeable portion of the wafer pyrometer signal. For this, an adaptive algorithm first of all adapts the optical properties of the system model (including e.g. emissivity, reflectivity and transmissivity of the wafer) so that the changeable portions (> 1 Hz) of the measured wafer pyrometer signal and of the forecast wafer pyrometer signal are covered. Because this adaptation algorithm only uses and compares the changeable portions of the measured wafer pyrometer signal and the forecast pyrometer signal, the adaptation succeeds independently of the state of the real system and the system model, in particular independently of the temperature of the wafer (object). After the adaptation, the optical properties and in particular the emissivity can be taken and measured from the system model